

"Saguramo-navtlugi" Gas main pipeline construction project

Section 10-20km

LOT #1

Bill of Quantities

№	Type of Activity	Unit	Quantity	Price
1	Transportation of pipes and other fittings to the construction site			
1,1	Transportation of ДН1200 non coated pipes	km	0,228	
1,2	Transportation of ДН720×14 coated pipes	km	0,0635	
1,3	Transportation of ДН720×10 coated pipes	km	10,493	
1,4	Transportation of ДН219×6 coated pipes	km	0,065	
1,5	Transportation of ДН159×6 coated pipes	km	0,081	
1,6	Transportation of ДН89×5 coated pipes	km	0,360	
1,7	Transportation of ДН57×3 pipes	km	0,035	
1,8	Transportation of bends and other fittings	unit	40	
2	ROW Preparation			
2,1	Topsoil stripping	km	10,603	
2,2	Shelf cutting and ROW leveling (as per design drawings)	km	1,7583	
3	Bending	unit	120	
4	Trenching			
4,1	Trench preparation for D=700mm pipeline section	km	10,603	
4,2	Trench preparation for D=219mm pipeline section	km	0,065	
4,3	Trench preparation for D=150mm pipeline section	km	0,081	
5	Welding			
5,1	Welding of D1200 non-coated pipes	km	0,228	
5,2	Welding of D720×14 coated pipes	km	0,0635	
5,3	Welding of D720×10 coated pipes	km	10,493	
5,4	Welding of D219×6 coated pipes	km	0,065	
5,5	Welding of D159×6 Coated pipes	km	0,081	
5,6	Welding of D89×5 Coated pipes	km	0,360	
5,7	Welding of D700mm Hotbends	unit	32	
5,8	Welding of fittings: (Tee 720x325-2units, Tee 159x6-1unit, Tee 219x8-1unit, Adaptor 325x159-1unit, Adaptor 325x219-1unit, Bend 90°-219-1unit, Bend 45°-159-1unit).	unit	8	
6	Non-destructive testing of Welded Joints			
6,1	X-Ray of D720 pipeline	km	10,603	
6,2	Double test of D720 pipeline with UT	unit	99	
6,3	X-Ray of D200 Pipeline	km	0,065	
6,4	X-Ray of D150 Pipeline	km	0,081	
6,5	Ultrasonic Test of D89 Pipeline	km	0,360	
7	Field Joint Coating			
7,1	Sandblasting of D1200 Casing pipes and coating with 3PE material	km	0,228	
7,2	Sandblasting of D700 welded joints and coating them with thermal sleeves	km	10,603	
7,3	Sandblasting of D200 welded joints and coating them with thermal sleeves	km	0,065	
7,4	Sandblasting of D150 welded joints and coating them with thermal sleeves	km	0,081	
7,5	Sandblasting of D89 welded joints and coating them with anticorrosive material	km	0,360	
8	Road Crossings			
8,1	Installation of D1200 casing pipes to the design depth	m	66	
8,2	Arrangement of casing from wood and dielectric material around the D700 mm pipe	m	66	
8,3	Installing D700 mm coated pipe section into the casing	m	66	
8,4	Installation of D1200 casing pipes to the design depth	m	59	
8,5	Arrangement of casing from wood and dielectric material around the D700 mm pipe	m	59	
8,6	Installing D700 mm coated pipe section into the casing	m	59	
8,7	Sealing ends of casing pipes with bitumen	unit	4	

8,8	Isolation of D50 pipe section (venting candel)	m	25	
8,9	Installation of D50 venting candel	unit	2	
9	Railway crossing			
9,1	Arrangement of casing from wood and dielectric material around the D1200 mm pipe	m	26	
9,2	Installing D1200 mm coated pipe section into the existing D1400mm casing	m	103	
9,3	Filling void between 1200 and 1400 mm casing pipes with concrete	m3	10,6	
9,4	Arrangement of casing from wood and dielectric material around the D700 mm pipe	m	103	
9,5	Installing D700 mm coated pipe section into the casing	m	103	
9,6	Sealing ends of casing pipes with bitumen	c	2	
9,7	Isolation of D50 pipe section (venting candel)	m	10	
9,8	Installation of D50 venting candel	c	1	
10	Pipe concreting, concrete slab arrangement and concrete weights installation			
10,1	Installation of RC slabs on the WREP crossing (1.5×1×0,1m)	m2	150	
10,2	Installation of rock shield on D700 pipes and ballasting with R/C weight	m3	31	
10,3	Concrete coating of D700 pipes with R/C B25	m	291,30	
11	Pipe lowering with preliminary preparation of 10cm soft ground bedding			
11,1	Preliminary preparation of 10cm sand bedding	km	10,749	
11,2	Lowering of D700 coated pipeline section	km	10,603	
11,3	Lowering of D200 coated pipeline section	km	0,065	
11,4	Lowering of D150 coated pipeline section	km	0,081	
11,5	Lowering of D89 coated pipeline section along with the D700 (same trench)	km	0,360	
12	Backfilling with the local ground, preliminary padding with sand around the pipe and 20cm above the pipe			
12,1	Preliminary padding with sand around the pipe and 20cm above the pipe	km	10,749	
12,2	D700 trench backfill	km	10,603	
12,3	D200 trench backfill	km	0,065	
12,4	D150 trench backfill	km	0,081	
13	Cleaning and Testing of pipeline			
13,1	Pre-testing of pipeline sections on 8.1bar during 12hours	km	1,3337	
13,2	Pre-testing of pipeline sections on 6.75bar during 12hours	km	0,466	
13,3	Pre-testing of Valves	unit	2	
13,4	D700 pipeline section cleaning with brush and magnetic PIGs	km	10,603	
13,5	Testing of D700 pipeline section	km	10,603	
13,6	Dewatering of D700 pipeline section with Polly PIG	km	10,603	
14	Installation of Valves			
14,1	Installation of D150 valve (NDT of welded joints, coating with 3layer of under ground parts and anticorrosion paining of above ground parts)	unit	1	
14,2	Installation of cold venting candle (D80 on venting candle)	unit	1	
14,3	Arrangement of D150 valve teritory, fencing and graveling	unit	1	
14,4	Installation of D200 valve (NDT of welded joints, coating with 3layer of under ground parts and anticorrosion paining of above ground parts)	unit	1	
14,5	Arrangement of D200 valve teritory, fencing and graveling	unit	1	
14,6	Installation of lightning protection	unit	2	
15	Anti-erosion activities			
	Installation of water drainage berms			
15,1	Soil processing for the arraignment of water diversion berm and lining it with rocks (drawing #NSGP002_GA00_PL_SCM_00021)	unit	3	
	Installation of trench brakers			
15,2	Installation of trench brakers with sand-cement mixture bags(6:1)	Breaker	13	
15,3	Installation of pipes between the trench brakers	m	41	
	Rip-rap installation			
15,4	Surface leveling and arrangement of 0,3 m thick layer using 40-70 mm gravel	m3	273	
15,5	Installation of rip rap with 0.8m diameter stones for 1 High	m3	790	
15,6	Surface leveling and arrangement of 0,15 m thick layer using 40-70 mm gravel	m3	36	
15,7	Installation of rip rap with 30kg rocks for 0.3 High	m3	72	
	Gabions arrangement			
15,8	Surface leveling and arrangement of 0,3 m thick layer using 40-70 mm gravel	m3	123	
15,9	Installation of Gabions (400x200x50cm) (filling with rocks 15cm)	unit	45	
15,10	Installation of rip rap with 30kg rocks for 0.4 High	m3	6	

	Installation of geomats			
15.11	Installation of geomats and reinforcement with anchors	m2	685	
15.12	Top soil spreading and seeding on geomats	m2	650	
	Installation of channels			
15.13	Installation of I type Longitudinal channels	m	325,1	
15.14	Installation of II type Reinforced Concrete Longitudinal channels	m	1471,9	
15.15	Installation of I type diversion channels	unit	4	
	Arrangement of passages over the pipeline			
15.16	Arrangement of 20 cm thick sand foundation for type I passage on the design pipeline	m3	9	
15.17	Preparation of 5cm thick sand-cement mixture (9:1)	m3	2,25	
15.18	Installation of reinforced concrete slabs (200x150x20cm)	unit	15	
15.19	Arrangement of 20 cm thick sand foundation for type II passage on the design pipeline	m3	15,6	
15.20	Preparation of 5cm thick sand-cement mixture (9:1)	m3	3,9	
15.21	Installation of reinforced concrete slabs (200x150x20cm)	unit	26	
16	Cathodic protection			
16.1	Installation of control metering units	unit	26	
16.2	Installation of B3K block for control metering unit	unit	17	
16.3	Installation of straps	unit	14	
16.4	Installation ПМ10-Y protectors	unit	18	
17	Other activities			
17.1	Installation of dielectric material on oil (WREP) pipeline crossing	m2	75	
17.2	Installation of warning tape on oil pipeline crossing	m	40	
17.3	Installation of marker posts	unit	29	
17.4	Installation of marker posts: "Beware Pipeline, Parking is Restricted"	unit	11	
17.5	Tie in to the existing line 150x150	unit	1	
17.6	Installation of D150 insulation joint (with welding edges)	unit	1	
17.7	Cost of vented gas	m3	67,51	
17.8	Tie in to the existing line 200x200	unit	1	
17.9	Installation of D200 insulation joint (with welding edges)	unit	1	
17.10	Cost of vented gas	m3	1531	
17.11	Ti in in existing pipeline (700x700)	unit	1	
17.12	Cost of vented gas	m3	94222	
17.13	Transportation and unloading of remaining pipes and other fittings to the Lilo PY	%	100	
17.14	Reinstatement in accordance with EMP	km	10,603	

Note: Bidder's cost estimate of pipeline construction should include costs of all those materials and devices that are considered by the construction project and are not provided by GOGC